

AMENDMENTS TO THE CLAIMS

Please replace the pending claims with the following claim listing:

1. **(Currently Amended)** A semiconductor optical device comprising
a mesa-stripe stacked body including at least a p-type cladding layer, an active
layer and an n-type cladding layer formed on a p-type semiconductor InP substrate doped
with Zn,
a current-blocking layer buried in both sides of said stacked body, and
an n-type over-cladding layer and an n-type contact layer disposed on said
current-blocking layer and said stacked body,
wherein said current-blocking layer is a single layer and a high-resistive layer
made of an InP crystal doped with Ru; and
said n-type over-cladding layer is made of ~~a semiconductor~~ an InP crystal doped
with a group VI element having a property for flattening a concavo-convex shape of
upper surfaces of said current-blocking layer and said stacked body.

2. **(Canceled)**

3. **(Currently Amended)** A semiconductor optical device according to claim [[2]]
1, wherein the n-type dopant is selenium.
4. **(Previously Presented)** A semiconductor optical device according to claim 3,
wherein doping concentration of the selenium is equal to or higher than $5 \times 10^{18} \text{ cm}^{-3}$.

5 – 15. **(Cancelled)**

16. **(Currently Amended)** A method of fabricating a semiconductor optical device comprising the step steps of:

forming a stacked body including at least a p-type cladding layer, an active layer and an n-type cladding layer on a p-type semiconductor InP substrate doped with Zn;

processing said stacked body into a mesa stripe-like shape;

burying a current-blocking layer which is a single layer and made of an InP crystal doped with Ru in both sides of said mesa stripe-shaped stacked body;

forming an over-cladding layer made of an InP crystal doped with a group VI element to flatten a concavo-convex shape of upper surfaces of said current-blocking layer and said stacked body; and

forming an n-type contact layer on said n-type over-cladding layer.

17. **(New)** A method according to claim 16, wherein the n-type dopant is selenium.

18. **(New)** A semiconductor optical device according to claim 1, wherein the current-blocking layer is disposed directly on the p-type InP substrate so as to contact the p-type InP substrate.

19. **(New)** A semiconductor optical device according to claim 18, wherein the n-type over-cladding layer is disposed directly on the current-blocking layer so as to contact the current-blocking layer.

20. **(New)** A method according to claim 16, wherein burying a current-blocking layer in both sides of said mesa stripe-shaped stacked body comprises growing the current-blocking layer directly on the p-type InP substrate.

21. **(New)** A method according to claim 20, wherein forming an over-cladding layer comprises growing the over-cladding layer directly on the current-blocking layer.